

# The 50 MHz DX Bulletin

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Issue #8

The 50 MHz DX Bulletin was founded by Harry Schools KA3B, is edited by Shel Remington N16E/KH6, and is published by Victor Frank K6FV. Issued at irregular intervals as frequently as possible, it is dedicated to the understanding and utilization of long-distance propagation in the 6-meter Amateur band. Annual airmail subscriptions cost \$20.00 in the US; US\$22.00 in Canada; US\$25.00 elsewhere. Make subscription remittances payable to Sheldon Remington and send to P. O. Box 1222, Keaau HI 96749, U.S.A.; DX reports are very welcome and should also be sent to the above address. This Bulletin may be freely quoted, provided that credit is given. All dates and times are Universal Time, and given in ISO/ANSI sequence: year/month/date/time.

## POLAND - OLSZTYN

### EXPERIMENTAL AMATEUR 50 MHz STATION

# 3Z4PAR

POLISH RADIOCOMMUNICATION

AGENCY & PZK ZO IN OLSZTYN

TEAM: SP4KM, SP4TKK,

SP4BOS, SP4SHH, SP4SHK

LOC - KO03GS

QSL VERIFIED by SP4KM



1992 June 5, Poland is officially QRV on 6 mtrs, see page 8 for details.

### Status of DXCC Countries on Six Meters

Continent:	OC	AS	NA	SA	EU	AF	WORLD
Total Countries:	53	52	48	31	62	77	323
C=Contacts Made:	50	29	46	23	51	43	242
D=DXCC-approved:	26	7	41	23	28	21	146
B=Bulletin Item:	51	35	46	28	59	55	274

### Oceania

DCB AMERICAN SAMOA  
 CB AUCLAND &  
 CAMPBELL IS  
 DCB AUSTRALIA  
 C BAKER &  
 HOWLAND IS  
 CB BANABA I  
 CB BRUNEI  
 B CENTRAL KIRIBATI  
 DCB CHATHAM IS  
 CB CHRISTMAS I  
 CB COCOS (KEELING)  
 CB CONWAY REEF  
 CB EAST MALAYSIA  
 DCB EAST KIRIBATI  
 DCB FIJI  
 DCB FRENCH POLYNESIA  
 DCB GUAM  
 DCB HAWAIIAN IS  
 CB INDONESIA  
 DCB JOHNSTON  
 CB KERMADEC IS

CB KINGMAN REEF  
 [?? mid-1988]  
 CB KURE I  
 CB LORD HOWE IS  
 DC MACQUARIE I  
 DCB MARIANA IS  
 DCB MARSHALL IS  
 B MELLISH REEF  
 DCB MICRONESIA  
 DCB MIDWAY IS  
 CB MINAMI-TORISMIMA  
 CB NAURU  
 DCB NEW CALEDONIA  
 DCB NEW ZEALAND  
 CB NIUE  
 DCB NORFOLK I  
 CB NORTH COOK IS  
 CB PALAU  
 CB PALMYRA &  
 JARVIS IS  
 CB PAPUA/NEW GUINEA  
 DCB PHILIPPINES  
 DCB PITCAIRN IS

CB ROTUMA I  
 DCB SOLOMON IS  
 CB SOUTH COOK IS  
 CB TOKELAU IS  
 DCB TONGA  
 DCB TUVALU  
 DCB VANUATU  
 CB WAKE I  
 DCB WALLIS ET FUTUNA  
 DCB WESTERN KIRIBATI  
 DCB WESTERN SAMOA  
 B WILLIS I  
 [cycle 21 QSOs??]

### Asia

ABU AIL,  
 JABAL AT TAIR  
 B AFGHANISTAN  
 [YA0RR QSOs 1991?]  
 ANDAMAN &  
 NICOBAR  
 ARMENIA  
 CB ASIATIC RUSSIA  
 AZERBAIJAN  
 BAHRAIN  
 B BANGLADESH  
 CB BHUTAN  
 CB CHINA  
 CB CYPRUS  
 GEORGIA

DCB HONG KONG  
 CB INDIA  
 IRAN  
 IRAQ  
 DCB ISRAEL  
 DCB JAPAN  
 B JORDAN  
 CB KAMPUCHEA  
 CB KAZAKHSTAN  
 CB KUWAIT  
 B KYRGYZSTAN  
 LACCADIVE IS  
 CB LAOS  
 CB LEBANON  
 CB MACAO  
 CB MALDIVES  
 CB MONGOLIA  
 B MYANMAR  
 CB NEPAL  
 B OMAN  
 DCB OGASAWARA  
 PAKISTAN  
 QATAR  
 CB SAUDI ARABIA  
 CB SINGAPORE  
 DCB SOUTH KOREA  
 CB SPRATLY IS  
 CB SRI LANKA  
 SYRIA  
 TAJIKISTAN  
 CB TAIWAN  
 CB THAILAND  
 DCB TURKEY  
 TURKMENISTAN  
 UNITED ARAB  
 EMIRATES  
 DCB U.K.BASES,CYPRUS  
 UZBEKISTAN  
 CB VIETNAM  
 CB WEST MALAYSIA  
 YEMEN

### North&Central America

DCB ALASKA  
 DCB ANGUILLA  
 DCB ANTIGUA  
 CB AVES I  
 DCB BAHAMAS  
 DCB BARBADOS  
 DCB BELIZE  
 DCB BERMUDA  
 DCB BRITISH VIRGIN IS  
 DCB CANADA  
 DCB CAYMAN IS  
 CB CLIPPERTON I  
 COCOS I  
 DCB COSTA RICA  
 DCB CUBA  
 DCB DESECHEO IS  
 DCB DOMINICA  
 DCB DOMINICAN  
 REPUBLIC



DCB EL SALVADOR  
 DCB GREENLAND  
 DCB GRENADA  
 DCB GUADELOUPE  
 DCB GUANTANAMO BAY  
 DCB GUATEMALA  
 DCB HAITI  
 DCB HONDURAS  
 DCB JAMAICA  
 DCB MARTINIQUE  
 DCB MEXICO  
 DCB MONTserrat  
 B NAVASSA I  
 C NICARAGUA  
 DCB PANAMA  
 DCB PUERTO RICO  
 DCB REVILLAGIGEDO IS  
 DC SABLE I  
 DCB ST. CHRISTOPHER &  
 NEVIS IS  
 DCB ST. LUCIA  
 DCB ST. MARTIN  
 CB ST. PAUL  
 CB ST. PIERRE ET  
 MIQUELON  
 DCB ST. VINCENT  
 DCB SAN ANDRES Y  
 PROVIDENCIA  
 DCB SINT MAARTEN, SA-  
 BA, ST. EUSTATIUS  
 DCB TURKS & CAICOS  
 DCB UNITED NATIONS HQ  
 DCB UNITED STATES  
 DCB US VIRGIN IS  
*deleted country worked (not  
 shown in totals):*  
 C CANAL ZONE

## South America and Antarctica

B ANTARCTICA  
 DCB ARGENTINA  
 DCB ARUBA  
 DCB BOLIVIA  
 DCB BRASIL  
 DCB CHILE  
 DCB COLOMBIA  
 DCB EASTER I  
 DCB ECUADOR  
 DCB FALKLAND IS  
 DCB FERNANDO DE  
 NORONHA  
 DCB FRENCH GUIANA  
 DCB GALAPAGOS IS  
 DCB GUYANA  
 DCB JUAN FERNANDEZ IS  
 B MALPELO I  
 DCB NETHERLANDS  
 ANTILLES  
 DCB PARAGUAY  
 DCB PERU  
 PETER 1 I  
 DCB ST. PETER &  
 ST. PAUL ROCKS  
 DCB SAN FELIX IS  
 B SOUTH GEORGIA I  
 SOUTH ORKNEY IS  
 [1989 QSOs]  
 B SOUTH SANDWICH IS  
 SOUTH SHETLAND IS  
 DCB SURINAME  
 DCB TRINIDAD &  
 TOBAGO  
 B TRINDADE &  
 MARTIM VAZ IS  
 DCB URUGUAY

## DCB VENEZUELA

## Europe

CB ALAND I  
 CB ALBANIA  
 CB ANDORRA  
 DCB AUSTRIA  
 DCB AZORES  
 CB BALEARIC IS  
 DCB BELGIUM  
 CB BULGARIA  
 B BELARUS  
 CB CORSIKA  
 BCRETE  
 CB CZECHOSLOVAKIA  
 DCB DENMARK  
 B DODECANESE  
 DCB ENGLAND  
 CB ESTONIA  
 CB EUROPEAN RUSSIA  
 CB FAROE IS  
 DCB FINLAND  
 DCB FRANCE  
 B FRANZ JOSEF LAND  
 DCB GERMANY  
 DCB GIBRALTAR  
 DCB GREECE  
 DCB GUERNSEY  
 B HUNGARY  
 DCB ICELAND  
 CB ITU GENEVA  
 DCB IRELAND  
 DCB ISLE OF MAN  
 DCB ITALY  
 JAN MAYEN  
 DCB JERSEY  
 CB KALININGRAD  
 CB LATVIA  
 CB LIECHTENSTEIN  
 CB LITHUANIA  
 DCB LUXEMBOURG  
 DCB MALTA  
 CB MALYJ VYSOTSKIJ  
 CB MARKET REEF  
 B MOLDOVA  
 B MONACO  
 MOUNT ATHOS  
 DCB NETHERLANDS  
 DCB NORTHERN  
 IRELAND  
 DCB NORWAY  
 CB POLAND  
 DCB PORTUGAL  
 CB ROMANIA  
 CB SAN MARINO  
 DCB SARDINIA  
 DCB SCOTLAND  
 DCB SOV. MIL. OR. MALTA  
 CB SPAIN  
 B SVALBARD  
 DCB SWEDEN  
 CB SWITZERLAND  
 UKRAINE  
 CB VATICAN  
 DCB WALES  
 DCB YUGOSLAVIA

## Africa

AGALEGA &  
 ST. BRANDON  
 CB ALGERIA  
 C AMSTERDAM &  
 ST. PAUL  
 ANGOLA  
 DCB ASCENSION I

CB BENIN  
 DCB BOTSWANA  
 B BOUVET I  
 B BURKINA FASO  
 B BURUNDI  
 CAMEROON  
 DCB CANARY IS  
 CB CAPE VERDE  
 DCB CENTRAL AFRICAN  
 REP  
 CB CEUTA & MELILLA  
 B CHAD  
 CB CHAGOS  
 CB COMOROS  
 CONGO  
 CROZET  
 DJIBOUTI  
 CB EGYPT  
 EQUATORIAL  
 GUINEA  
 ETHIOPIA  
 DCB GABON  
 DC GAMBIA  
 B GHANA  
 CB GLORIOSO IS  
 DCB GUINEA  
 DCB GUINEA-BISSAU  
 B HEARD I  
 DCB IVORY COAST  
 JUAN DE NOVA &  
 EUROPA  
 B KENYA  
 [QSOs cycle 21 ??]  
 KERGUELEN  
 CB LESOTHO  
 DCB LIBERIA  
 LIBYA  
 B MADAGASCAR  
 DCB MADEIRA  
 CB MALAWI  
 B MALI  
 MAURITANIA  
 MAURITIUS  
 CB MAYOTTE  
 DCB MOROCCO  
 B MOZAMBIQUE  
 DCB NAMIBIA  
 B NIGER  
 DCB NIGERIA  
 PAGALU  
 CB PENGUIN IS  
 CB PR. ED. & MARION IS  
 CB REUNION I  
 RODRIGUEZ I  
 CB RWANDA  
 CB ST. HELENA  
 B SAO TOME &  
 PRINCIPE  
 DCB SENEGAL  
 CB SEYCHELLES  
 DCB SIERRA LEONE  
 SOMALIA  
 DCB SOUTH AFRICA  
 B SOUTHERN SUDAN  
 SUDAN  
 DCB SWAZILAND  
 CB TANZANIA  
 CB TOGO  
 B TRISTAN DA CUNHA  
 & GOUGH IS  
 TROMELIN  
 TUNISIA  
 UGANDA  
 DCB WALVIS BAY  
 CB WESTERN SAHARA  
 DCB ZAIRE  
 CB ZAMBIA  
 DCB ZIMBABWE

Entries in the D column came from PY5CC, W5FF, and K5FF. Thanks to many readers for the C entries. It was quite a surprise to find that only 81 of the 323 current countries have not yet been worked by someone on 6m! Please peruse the above list and let us know of any additions to the D and/or C columns. Please note that, in compiling these tables, we are not trying to act as judges of the validity of claims. The purpose of these listings is only to allow DXers to generate a personal checklist of "needed, active" countries and fields, and more generally to demonstrate that 6m has very much come of age as a global DX band.

## Errata

**Fields:** In the Fields compilation in Issue #6, in the H-series, HK was typoed as KH, and Fields HP and LH should have been listed. Also, Fred W5FF adds GP and QD, Ray WB8YFE has FO, and Dave K8WKZ adds DP, FO, GP, and GC (who activated GC, Dave?). So the new total is 128 Fields known to have been worked on 6m. Presumably, all of these Fields were worked subsequent to the beginning of the VUCC program on 1983 January 1. If any reader has worked any Fields additional to those 128, please let me know, so that the list can be kept as complete as possible.

## 45 & 46 MHz Video

**Frequencies:** The ZL/VK video offset listings in Six News #31 and 32 are both riddled with errors, as were those in this Bulletin V1 I1 and V2 I12. It seems the same old guesses have been passed around and reproduced without anyone bothering to check them; in fact, each new generation has added new errors. Until we have listings from reliable sources, suffice to say that if you have video carriers on 45.24, 45.25, or 45.26, you have 45 MHz propagation to some part of New Zealand. And if you have video carriers on 46.17, 46.24, 46.25, or



46.26, then you have 46 MHz propagation to eastern Australia.

Regarding Asian and Malaysian/Indonesian usage of channels E2 (48.25  $\pm$ ) and R1/C1 (49.75), we likewise have seen many listings, but they are contradictory with each other and with some DXer observations. For example, 49.75 is definitely being used in Vientiane, but that transmitter does not appear in official listings. Also, there are certainly numerous 48.25 transmitters in the south Asian subcontinent, but again, these are all curiously absent from ITU and other listings.

While it is appropriate for DXers to speculate and share observations about these important indicators, it is inappropriate to publish such speculations as factual, or to use uncertain signals, by themselves, in scientific propagation studies. For the latter purpose there is no substitute for the real McCoy, a genuine, 24-hour, 6-meter beacon!

## THOSE LITTLE PROPAGATION MYTHS

**1. A solar noise burst heard on 6 meters is a flare.** The noise bursts we hear are due to shock waves traveling outward in the solar corona. These result from mass ejections, which can sometimes be associated with flares, but usually there is no such correlation. If we keep a log of such noise bursts, and later compare the log with NOAA flare lists, we find almost no correlation. This myth is kin to the one that says unsmoothed daily 2800 MHz solar flux numbers correlate to solar ionizing radiation. So when our S-meter is pegged by solar noise and we pick up the 28885 mic, let's blurt out 'solar noise' or 'solar noise burst,' not 'solar flare.'

**2. Flares usually have dramatic effects on 6-meter  $F_2$  propagation.** There are two possible ways that such effects might happen: directly due to ionization, and indirectly due to the (delayed) arrival of solar particles shaking up the Earth's magnetosphere.

The direct effect might be expected because the Sun's output of X-ray and ultraviolet photons is greatly enhanced during a large flare. This enhancement should result in augmented ion densities in all layers on the sunlit half of Earth. Users of the HF spectrum, who normally operate well below the MUF, worry about flare effects in the D- and E-regions. This is because increased ionization in those regions has the effect of higher absorption, which raises the LUF; it is this effect that causes SIDs and SWFs. But in the upper reaches of the spectrum where we 6m DXers operate, such absorption is not a factor---our problem is that the atmosphere is too transparent, virtually never too opaque. In the F-region, the expected effect of increased UV and X-rays from a flare would be higher MUF's, good news at 50 MHz. And, on occasion, we do see immediate changes that can be ascribed to this effect. Most of the time, however, whatever  $F_2$  is, or is not, in progress at the beginning of a flare simply continues unchanged. We can only speculate why; probably the 'inertia' of the ionosphere is the chief factor. But whatever the reason, theory must follow from the observations, not vice versa [and it is we 6m DXers who supply the relevant observations, not Boulder or Stirling].

The indirect effect, by which particles ejected during a flare stir up a magstorm on Earth, is more complicated. First of all, flares are characterized as major based on their X-ray luminance, not their particle ejection. A particular major flare may or may not be accompanied by ejections of particles of the type, and quantity needed to produce a magnetic storm. Second, the flare must be positioned so that ejected particles intersect with the Earth. Because of these factors, only about one-third of all magstorms are

flare-related (the other causes being coronal holes and disappearing filaments). Then, even if a magstorm does arise (when the particles arrive 24-48 hours after the flare), its effect on 50 MHz propagation is by no means certain. A really large magstorm will very probably have some effect on 6m  $F_2$ , but this effect can be either positive or negative. The great storm of mid-March 1989 really did wipe out 6m for about a day, although the day after was very good indeed. On the other hand, the big magstorm of 1991 November 8-9 was accompanied from start to finish by fabulous DX at all latitudes. To wit: November 8, around 0200z, K-index steady at 8 and aurora in full bloom, this editor worked W1, VE1-2-3-5-6-7, and North Dakota, among other DX. Those locations are the magnetically-northernmost with any concentration of 6m DXers, and here I am having a my best-ever opening to them in the middle of a great magstorm! Next day, around 1730z, A-index 99, K-index about 8, and I had statistically my best single day (25 countries) of Cycle 22, again including areas (W2-3-9) which are supposed to be dead for  $F_2$  in auroral conditions.

So, when we hear that a big flare has occurred, our best course of action is simply to keep right on DXing on 50 MHz. Any immediate effects at these frequencies, if any, will be subtle. We should watch the K-index for the next couple of days, because it will tip us off to impending auroral and auroral-E propagation possibilities, but not because it will tell us what the  $F_2$  will do.

**3. The A-index and K-index are measures of two different variables.** In fact, the A-index is simply derived from the eight K values for that day. A K-index describes, on a logarithmic scale, the peak variation of the geomagnetic field's intensity over a 3-hour period. An A-index is a summation of 24 hours worth of K-indices, converted to an expanded linear scale. So the raw data for both indices come from the same magnetometers.

**4. The 2100 UT A-index reported on WWV/WWVH is the final value.** Listen closely to the wording of the 2100 geoalert: they call it the 'estimated' A-index. This is because it is based on seven K-indices, rather than eight. What it means is that they are guessing what the final (eighth) K-index value will be. The next update at 0018 drops the word 'estimated.' The reason they don't just wait until the eighth K is available three hours later is that the new solar flux value is given at 2118, and a lot of listeners who don't especially care about the exact A-index tune in once daily at 2118 for the flux. In our case, when we pass the numbers around on 28885, that act lends an ersatz formality to these numbers which is inappropriate for the 2118 A-index guesstimate. If you keep a log of the daily numbers, try to wait until 0018 so that the A index will be the correct one.

**5. The verbal characterization (low-moderate-high-etc.) of solar activity on WWV/WWVH is simply based on the 2800 MHz flux.** If this were the case, the verbal statement would be useless for anyone who has an idea of typical flux levels, and on that assumption we rarely hear the verbal characterization being passed on 28885. In fact, this characterization is based on a very different solar parameter from the 2800 MHz flux: the soft X-ray emission. And, as discussed previously in these pages, X-ray emission (and hard U-V) does ionize the F-region of Earth's atmosphere, unlike the 2800 MHz emission. Of all the items on the WWV/WWVH geoalerts, this is the only one that is likely to give us a clue about 6-meter  $F_2$  ionization. So let's relay it on 28885, if we relay any geoalert information.



## PROPAGATION HIGHLIGHTS

We have reports of two openings in June on opposite sides of the planet which spanned amazing distances for this season, and which are rather similar in some ways. Both have path lengths which could be described as triple-hop  $F_2$ . And both occurred very close to local sunset at the eastern end of the path, so it seems likely that twilight layer-tilting enhanced the MUF.

One was a contact between JD1BFI in QL17fb and ZS6AXT in KG33vv on June 29 at 0912. The path length is 13,586 km (8442 miles), and this occurred just 12 minutes prior to sunset in Chichijima.

The other event is reported by Don K8MFO: "During the ARRL VHF Contest I made what I consider to be an unusual QSO. On June 14 at 1528 I worked 7Q7CM on 50.111 CW. It was a solid QSO; I gave him 559 and he gave me 519. Grid squares were also exchanged. It beats anything I've ever done in the summer! I know that 7Q7 is a hot spot, but this is ridiculous. By the way I was running 80 watts to 6 elements at 42 feet." This QSO occurred some 11 minutes after local sunset in Blantyre. The path length is about 13,130 km (8160 miles). What a pity that these contests don't give any scoring credit for distances worked.

Meanwhile, *simultaneous* with the above, 9H5EE reports an extraordinary opening on June 14 from about 1430 past 1730. All of the following stations were, or could have been, in mutual contact during this period: CT1LN (IM67), ZB0T (IM76), I2ADN/IG9 (JM65), 9H5EE (JM75), SV1EN (KM18), 5B4YX (KM64), ZC4KS (KM64), TA5ZA (KM77), 4X1IF (KM72), and 9K2ZR (LL49). Only one station per country is listed, but there could have been several. The distance from CT1LN to 9K2ZR is some 5100 km (3170 miles). John observes that all contacts appeared to be tropo, with slow QSB. We concur, except in the case of 9K2ZR, to whom the path is obstructed by mile-high mountain ranges and then traverses a thousand miles of Arabian desert; perhaps he was linked by a sporadic-E hop. Interestingly, the bearing from Ohio to CT1 is not far north of the above-mentioned path from Ohio to 7Q7; think of the possibilities if K8MFO had gotten into this Mediterranean opening! Also, GJ4ICD heard the ZD8 beacon at 1730 on this date.

A few hours earlier, there was a JA-to-stateside multihop-E<sub>s</sub> opening. This was June 14 at 0530-0700; K6QXY reported that he and some Pacific-northwest stations worked KL7NO, NL7OW, and some JA3-9-0 stations. Bob also noted some multiple R-1 video carriers around 49.75 MHz during this event, and he adds that signals were good with rapid QSB. We later heard that JA's also worked N0LL and WB0DRL in Kansas, plus AA6TT in Colorado, during this opening, which is farther inland than we can recall any previous E<sub>s</sub> event to JA having penetrated. Some additional JA-to-West Coast openings occurred in the same time frame later in June. However, we have no details on those, except that N6XQ says that JG2BRI was quite loud at one point.

Recent transAtlantic E<sub>s</sub> reports include June 5 at 1943-2030, when PZ1's were into Italy and the U.K. On June 6 GJ4ICD heard the VO1 beacon at 1800, and the FY7 beacon at 2000. June 7 brought FM5WD into Scotland. On June 17 about 1915, LU stations were heard in Europe. On June 19 at 1900, GJ4ICD copied the FY7 beacon again, and at 2042 W1's had Malta. June 20 at 1610, Geoff worked K1MNS and WA1AYS, then turned around and worked eastward as far as UZ2 and 4X. June 21 from

1946 to 2155 the U.K. had VO1, VE1, VY2, and some weak W's. On July 19, K3MLD reported the CT0 beacon around 1530. G3 had W1-2 late on July 21, and again the next evening.

The *big* day was June 22. GJ4ICD reported 'band is on fire' as he worked 9K2ZR at 1320. Starting at 1448 Geoff noted VE1's, VE3KKL, VE5KK, and later he had OX, VE, W1-2-3 at S9+. John WA2FUZ says the band was open into Europe for 6+ hours; he was temporarily set up with a 5-element beam just 12 feet high, but managed to work as far as Yugoslavia! Gord VE3KKL sent a log showing two openings at 1458-1543 and 2008-2316, with contacts in at least 14 European countries as distant as YU. That there were some exotic ones on the band that day is shown by GJ4ICD's log, which includes LZ and UZ2. Geoff also had Z23JO at 1744, and 7Q7RM was reported into Sweden at 16-17z, simultaneous with W's. The T-A path was open as late as 0040, with the OX3 beacon still being heard by G0JHC.

It is rumored that AA6TT/0 was heard in the U.K. on or about June 17; no details.

WW6J reports two meters (144.2 MHz) was open for sporadic-E on June 25 between 0000-0130Z to W0 & W5s, including W5FF and W5SFW. Another two meter sporadic-E opening was reported by WA6LHD on August 6 between 0000-0200 to Colorado, Wyoming, New Mexico. Your publisher (K6FV) even made his first 2 meter E<sub>s</sub> contact at 0112z with WA7KYM in Cheyenne with only 25W.

In Asia, UL7GCC had JA1-2-3-6 on July 15 at 0236-0330 and again at 0944-0957. Then a shocker: on July 26 at 0828-1000, JA1-2-3-6-8-9 had DL, YU, OH, OK, and OE. The distance for this path requires at least 5 hops of sporadic-E!

On equator-crossing paths, PY5CC reports European openings on June 11 at 1930, June 13 at 1839, and June 15 at 1925-50. Some LU's had Europe late on the 17th, and the PY2AA beacon was heard in Sweden on June 20 at about 1800. African openings have continued into Europe, bringing 7Q7, ZS6, V51, Z23, and the good ol' ZD8 beacon.

In Hawaii, we had extensive JA's on July 12 at 0558-0918, with NH6YK/KH4 in the middle working both ends, and FO5DR also showed up on TEP during that opening. A lesser opening to the JA6 beacon occurred on July 14 at 0700-0802. It was in again on August 11 at 0621-0630, preceded by a few minutes of KH4. August 18 at 0500-0730 we had JA1-2, and the season's first Malaysian 48 MHz videos. The multihop E<sub>s</sub> path to the mainland U.S., after a good start, has been poor here since mid-June, with just 556 minutes of W6 and Arizona propagation on 7 dates since the equinox. TEP has been normal, yielding one or more of P29-T2-FO-FK-3D2-ZK3-V73-KH3 on 47% of nights in June-July. June 5 produced 3 strong northern VK2's at 0725-0842, but the only VK signal since then was VK4BRG and/or his beacon on July 22 at 0806-0819 and August 12 at 0850-0910.

In other Pacific T-E news, NH6YK/KH4 worked VK4's on July 17 at 0826, August 9 at 0920, and August 12 at 0852. Ted also worked 3D2PO on August 3 at 0810-0830 and P29PL on August 9 at 1007-1045, a partial QSO with FK8EB on August 9 at 0806, and 3D2ER on August 18 at 0814. K6QXY reported hearing the FO5DR beacon weakly on August 13 about 2000.



In the moonbounce department, K6MYC worked OH2BC several times in June and July via 6m E-M-E, both from his home in central California and from his other QTH in Kona, Hawaii.

For what it's worth, NOAA-SESC in Boulder is predicting an upsurge of solar activity in September-October. They also predict mid-1996 for sunspot minimum. We predict plenty of 6m DX upcoming!

In the old news department, your editor has just received an SWL report, delayed 40 months via bureau, from Vlad V. Sinkevitch UO5-039-537 in Rybnitsa, Moldova (KN47). He evidently heard me with 5x4 sigs while I was working DL3ZM/YV5 on 1989 April 2 at 2116. I also had propagation around that time to W4-TI-HP-PJ9-HC-ZD8, and HP3XUH was reporting 5H3 and ZS3. This could only have been a long-distance (183 degrees of longitude) side-scatter path. It happened just 29 days after an almost identical path brought an SWL report to KH6HI from Vilnius (LY) while Bert was working HP3XUH, and 7 days after KH6JK scooped us all by working EA8AKN with his beam on South America during a CX-LU opening.

Less lengthy side-scatter paths are sometimes reported in other regions: Europe to Japan with both sides beaming to the Indian Ocean, VK4BRG to South America with both sides beaming to Hawaii, and San Diego to Japan with both sides beaming to the South Pacific. The mystery is why there seem to have been no reports of western North America working Europe, with both sides beaming to the equatorial Atlantic. This ought to be possible in the 1530-1900z time frame. Monitor the 48.25 and 49.75 video carriers, and keep trying!

The Hawaii to Europe long-path prime season (mid-September to late October) is almost upon us. Your editor will be watching the indicators closely every day at 0800-1230z, and will be CQing heavily in CW on 50.102 primarily if an opening seems possible. Europeans should beam about 160 degrees for this, and it is unlikely to be accompanied by any indicators on that end. We KH6's are still looking for our first U.K. contact!

## NEWS OF OCEANIA

**Central Kiribati:** There are three separate possible 6m operations being rumored for Kanton Atoll later this year. One is that Jack VK2GJH/T30JH may go there in late September or early October. The second is that W6JKV/T30JT may go there in November. Finally, per W1AW, Jim VK9NS has secured permission for a T31 operation.

**Johnston Atoll:** A new FM broadcast station is being installed at KH3, and an RFI problem on this tiny island may result from 6m operations. More on this as it develops. Tnx KH6HH.

**Marshall Is:** Tim V73AT ended his long stay on Kwajalein on August 5. He has relocated to the Colorado Springs area, where he'll be active as N2PC/0. Tim thanks Bob K6QXY for the loan of the 6m amplifier, which is now free for use elsewhere. We, in turn, thank Tim for his dedication to 6m, supplying a large quantity of propagation observations, giving many operators a new country, and greatly enlivening the Pacific 6m scene. Bob V73BQ remains on Kwajalein, with 6m gear, but is unlikely to be very active.

**Mellish Reef:** The much-rumored HIDXA DXpedition here may yet take place, possibly for 4-5 days in early

September, possibly using the callsign VK9MM. For late updates, check with the 14.222 net daily at 0530. Tnx VK4BRG and VK4APG.

**Midway Is:** Ted NH6YK/KH4 was active on 6m until about August 20. He used an IC-575H and 5 elements, and was there for a bird-counting project. A Technician class licensee, he was also heard on 28.480 MHz. Tnx KH6HH. QSL to T. A. Brattstrom, 2464 Halelaau, Honolulu HI 96816. Tnx WVHFN. Ted worked five countries on 6m: KH6, 3D2, P29, VK4, and JA, plus a partial QSO with FK. He enjoyed this first 6m experience, even in the Pacific quiet season, and hopes to be active from his home in Hawaii.

**North Cook Is:** Bob ZL4DO was briefly active as ZK1RS on Penrhyn in late July, with 6m gear, but was not known to have made any 6m contacts. QSL to his home call.

**Palau:** Charlie W0RRY and Troy N5OK are tentatively planning another DXpedition here next February, using calls KC6RR and KC6OK, respectively. They would have a TS940S, IC745 (for 28885), and either an IC551D or an IC575H. The 6m-modified Yaesu linear caused problems on the last trip, so they looking for a loaner 6m linear for this operation. Tnx Charlie.

**Tokelau Is:** Here are the final totals for the recent ZK3TPY operation. Kerry worked about 520 stations in 17 countries, of which some 450 were JA's. Despite being stranded on Nukunonu for a month and a half, he never worked or heard any station in North, Central, or South America except PY5CC.

**Wake I:** Jim VK9NS was active on HF here in late June as WR1Z/KH9. The IC-575H which is kept on Oahu for loan to Pacific DXpeditions was air-shipped to Wake for Jim's use, but it didn't make it that far. At Kwajalein enroute it was inexplicably pulled off and returned to Honolulu, so no 6m from KH9 this time. Regarding resident op Tom AH9AC and his loaner 6m rig, we have learned that he returned it to Japan long ago, without putting it to use. Tnx KH6HH.

**Willis Is:** The much-rumored HIDXA DXpedition here may yet take place, possibly for about 2 days in early September, with a possible callsign of VK9WW. For late updates, listen in on the 14.222 net daily at 0530. Tnx VK4BRG and VK4APG.

## NEWS OF ASIA

**Asiatic Russia:** A JA group was planning to activate 6m from Sakhalin Island, signing EK0F, on August 6-19. Tnx WVHFN.

Another operation was active on July 20, signing EK0JLA, operating 50.110-115. No further details. Tnx WVHFN.

**Iran:** The ubiquitous Romeo operated here in August, signing 9D0RR. According to WVHFN, this operation included 6m. QSL via NT2X. Tnx Hat.

**Kuwait:** Don 9K2WR departed in June, but both Bob 9K2ZR and Tom 9K2TC have been very active, with both partaking of good European openings. Tom's QSL route is via Canadian Embassy, PO Box 25281, Kuwait City, Kuwait. A number of stations have reported working 9K2ZC, but Bob 9K2ZR states that no such callsign exists. Tnx G4UPS, 9H5EE, and WVHFN.



**Lebanon:** QSLs for Samir OD5SK go via his manager Lawton L. Coonts KB5RA, 809 Sweetwater Island Cir., Longwood FL 32779. Tnx 9H5EE. He was reported working into Europe in June. Tnx WVHFN.

**Mongolia:** JU830C was reported on 50.110 ssb/cw into Japan recently. Tnx VK4BRG. In July they were operating from the Gobi Desert, signing JU830C/JT4. This operation included JA1UT, JA1CMS, JA1UPA, JR0CGJ, and JT operators. QSL via JT1KAA. Tnx WVHFN.

**Taiwan:** Active stations here in July included not only the familiar BV2DP and BV2DQ, but also BV2DB, BV4CS, BV4FG, and BV7BW. No further details on the permanence of these yet. Tnx WVHFN.

**Turkey:** Uffe OZ1DOQ and OZ1FTU planned activity from TA2-6-8 from July 14 to 29. Grids activated were to possibly include KN40-41-51-61-62-71-72. QSL via OZ1DOQ. Tnx G4UPS and 9H5EE.

Eric TA5ZA (ex-F1JKK/TA5) in KM77fa was active until July 29. QSL to Antoine Baldeck F6FNU, PO Box 14, F-91291 Arpajon Cedex, France. Tnx 9H5EE.

## NEWS OF NORTH AMERICA

**Alaska-Canada:** WB7QBS sent a log for his grid-pedition to the Alaska panhandle in June-July. Unfortunately, while operating from CO45-46 in the panhandle, he made no contacts and only tentatively heard one station: W7PQE. However, on July 7, operating from rare grids CO82-91-92, he had a nice 5-hour E<sub>s</sub> session into W4-5-6-7-8. QSL to Glenn Skinner, 931 Grandview, Sunnyside WA 98944. Tnx Glenn.

**Anguilla:** The N6CW/VP2E operation had to be cancelled due to transportation unavailability. Tnx N6XQ.

**Canada:** On June 14, during the ARRL VHF contest, Larry N0LL worked VE8KM at Cambridge Bay on Victoria Island (DP79). This is less than 800 km/500 miles from the North Magnetic Pole, and only 4760 km/2960 miles over the pole from Edinburgh. Unfortunately, we have no additional details on VE8KM; if any reader can help, it would be very much appreciated.

Dave N8NQS had a very successful grid-pedition in late June into Ontario. His first day in EN97 coincided with the great June 22 E<sub>s</sub> opening into Europe, and Dave made over 50 QSOs into Europe, as distant as Italy. With additional propagation via aurora, he finished with 116 QSOs from EN97. Then he moved to EN98, and made 40 contacts. Next stop was EN87, where another aurora swelled the QSO count to 70. EN88 followed with 40 QSOs. Finally, Dave decided to activate EN99, by request from WW8M, and 30 minutes of operation produced 5 contacts, including one with Don. Dave also made numerous mobile contacts enroute with a Squalo. A FB DXpedition, thanks to his wife Linda and hosts VE3XAL and VE3PGY, and to K8WKZ and N8PYO for equipment help. QSL to Dave Bostedor N8NQS, 434 Pattie Ave., Jackson MI 49202. Dave has only been licensed since 1991, but has obviously been well inspired by his father, Dave K8WKZ (holder of 6m VUCC #1, and 6m DXCC #8). The inspiration is now mutual, as Dave Sr. writes that he is rigging up a house trailer for use in activating vacant FN grid squares next year!

John WZ8D, accompanied by WA8NJR and WA8R, conducted a Grid-Mobile trip to central Ontario from July 2 to 7. Grids activated were expected to be EO70-80 and EN79-89. QSL (with SASE) to John Walker, 1930 Meredith Dr., Loveland OH 45140-9613.

Peter VK4APG took a summer tour around the western U.S. and VE6-VE7, with an FT-690R, 80-watt amplifier, quarter-wave whip, and 2-element quad. QSL to Peter Garden, 58 Minerva Crt., Eatons Hill, Qld Australia 4037.

**Clipperton:** Beautiful QSLs have been mailed for the recent FO0CI operation, and W1AW advises that it has been accredited.

**Cuba:** CO2KK's QSL Manager W9JUV writes, 'please advise readers to have patience with CO2KK QSLs; summer band doldrums (on 10 and 15) have made skeds with Arnie non-existent, but when condx pick up we will get our backlog worked down quickly.' Address: Joseph Schroeder Jr., P. O. Box 406, Glenview IL 60025. Tnx Joe.

**Desecheo Is:** The group, including N0TG, WA4DAN, KW2P, AA4VK, and W0RJU, which activated Navassa earlier this year is planning a KP5 operation for December 28 to January 4. Landing permits have been received and travel reservations made. Six and two meters will be included if enough requests are made. Contributions of \$5 are being solicited; include an SASE so a printed bulletin can be sent to you prior to departure. Mail to: Randy Rowe NT0G/5, 2120 Reverchon Drive, Arlington TX 76017. They also hope to get back to Navassa at some time during 1993 or 'possibly an even more exotic place for which we are currently investigating the possibilities.' Tnx WB8TDG and W1AW.

**Guadeloupe:** During the ARRL contest, Harry KA3B/VP5 worked FG3FR and FG5BG. He heard them CQing on 50.105 with a chirpy signal at S9+30dB, so he called them and they responded on SSB. Both stations were using the same rig (type unknown), but they did say they had 150 watts and 5 elements. Pat W5OZI also worked them for a new country. Can any reader furnish more details on these stations, such as QSL routes, phone numbers, permanence, etc.?

**Haiti:** Pat W5OZI worked HH2PK during the June contest. Pat gives his grid as FK38; an earlier report had stated FK28. QSLs go to Patrick Cardoz, P O Box 1095, Port-au-Prince, Haiti, Leeward Islands, and he suggests registered mail to avoid losses. Tnx Pat and KA3B.

HH7PV QSLs are being sent out very promptly by his new manager, James L. Greene AA5DW, 2409 Maxwell, Midland TX 79705.

**Mexico:** Peter XE2/W9DHK made 90 QSO's in 33 grids from northern Baja (DM12) during the ARRL June contest. The most distant was Minnesota; he heard none of the Caribbean stations which were working into W5 that weekend.

Terry XE2/N6CW made only 3 contacts from DL37 on the Saturday of the contest, then on Sunday he had 75 QSO's from DL46. He reported hearing plenty of stations but was unable to get through the QRM because most ops were not beaming far enough south. Other grids from which at least one contact was made on the ten-day trip were DM10-11-20 and DL29-38; no contacts were made from DM12 or DL28-36. The QSO total for the trip was 420. The band was open every day to someplace, and several nights he shut down at 11pm with the band still open to the East but nobody to work.

Fred W5FF is looking for QSL info for XE1ABA in DK89. In April, Juan was heard requesting QSLs to his callbook address, but Fred finds that Juan is not listed in the 1992 callbook. [Fred, it occurs to me that XE1ABA was listed as one of the operators on the recent XF0C



DXpedition, so maybe you can try QSLing via the XF0C route: Hector Espinosa Flores, P.O. Box 231, Colima 28000.--ed.]

**Turks and Caicos:** Harry KA3B reports a QSO total of 620 during his VP5 operation on June 11-16 from Providenciales (FL31). These included 54 in W1, 72 in W2, 71 in W3, 225 in W4, 49 in W5, 53 in W8, 4 in W9, 20 in W0, 6 in VE1, and 9 in VE3. DX stations worked included CO2KK, C6AFP, NP4NP, VP2MO, FM3AG, FG3FR, and FG5BG. Despite numerous attempts with PY5CC, the only South American signal heard was the YV4AB beacon on two occasions. Nothing was heard, even on 10 meters, from Europe or Africa. During the ARRL contest, Harry had a Saturday morning opening which ended just as the contest began, so he only worked W3CCZ. The band was dead until that evening. On Sunday morning (June 14) the band was so wide open that he had to QSY above 50.250 MHz in order to find a clear spot, but he did quite well up there. Some of the DX worked or heard included FP/VE1KM, VP9's, CO2KK, HH2PK, HH7PV, KP4's, KP2A, VP2MO, FM's, FG's, J7's, XE's, and TI's [drool!-ed.]. Harry comments, "Needless to say, the DX Window was a zoo! You had to hear it to believe it." He used an IC-551D at 80w into an AR-6 vertical; QSL to Harry Schools, 1606 South Newkirk Street, Philadelphia PA 19145.

**United Nations HQ:** 4U0UN was active in late May, giving a new one to several lucky West Coast stations. Tnx N6CW.

**United States:** Pat W5OZI reports the results of the unique intersection-pedition conducted by him, John KB5TUA, and Nick W5FUA in west Texas during the June Field-Day contest. Their equipment was placed directly atop a marker which was established by a surveyor at 30°00'00"N/104°00'00"W, the intersection of DL79-89-DM70-80. Despite an onslaught of golf-ball sized hail and 60 mph winds, plus poor 6m conditions, they made 82 contacts on 6m. Pat is prepared to provide documentation of the survey work to ARRL in accordance with VUCC MCS-261(186), paragraph 4(e). Sounds like great fun, Pat; tnx for the report.

## NEWS OF SOUTH AMERICA

**Trindade and Martim Vaz Is:** A note from PY5CC mentions a possible DXpedition to Trindade in August. PY3ASN would sign PY0TSN, and operate 6m through 40m. However, nothing recent has been heard about this on the INDEXA net or elsewhere. Tnx Peter.

## NEWS OF ANTARCTICA

**Antarctica:** Steve VK3OT has dropped plans to activate VK0 himself in the near future, but instead will try to arrange for another VK0 operator to activate this continent on 6m. Tnx 3D2PO.

## NEWS OF EUROPE

**Aland I:** Seppo OH0MMM (also known as OH3MMM, OH1VR, and OH2BA) in KP00 was worked by 9H5EE on June 4, followed by other Maltese stations. QSL to Seppo Sisatto OH3MMM, Lansirinteenk 23, SF-33400 Tampere, Finland. 9H5EE reports that the OH1VR address no longer seems valid, as his letter was returned.

OH0BBF in Brando (KP00) was activated by Eric OH2BBH and Jan OH2AUK for the UKSMG contest June 6-7. They made 600 contacts in 29 countries. QSL to Erkki Heikkinen, Myrskylä 3, SF-10900 Hanko, Finland.

Tnx 9H5EE and G4UPS.

**Albania:** The callsign ZA1A was activated by a visiting OH expedition at Dures in JN91 (on the coast, west of Tirana) between July 1 and 14. They were worked extensively in Europe on 6m. QSL via OH2BC (address below under European Russia). Tnx G4UPS, 9H5EE, and GJ4ICD.

**Andorra:** 9H5EE reports that C31NP is rumored to be QRV on 6m. Anyone have further information?

**Balearic Is:** Participating in the new Spanish authorization (see below), EA6 has joined the 6m festivities. Gabriel EH6VQ in JM19mp has been very active, and EH6AHS and EH6UH have been heard. Tnx G4UPS and 9H5EE.

**Belgium:** Some reports of difficulty in getting a QSL from Alain ON4KST can be ascribed to a recent QTH change. Here is the new route: Mr. Alain Stievenart, Bruyere Des Berelus 16, 1472 Vieux - Genappe, Belgium. Tnx G4UPS.

**Bulgaria:** G4UPS reports that a considerable number of stations have now worked LZ1JH (or is it LZ2JH?) in KN22wr. He is believed to have a permit, and to have made his first 6m QSOs around May 14. Another station recently heard was LZ1MC. Tnx Ted.

Harry LZ1BB in KN12ss worked most of Europe on June 21 and later dates. QSL (direct only) to: Haralampy Popov, bul Bratya Bakston 207-A A-6, 1618 Sofia, Bulgaria. Club station LZ1KDP in KN12 also worked most of Europe on June 21 and later occasions. Tnx 9H5EE.

**Czechoslovakia:** G4UPS sends this list of OK stations worked on 6m up to May 31: JN79: OK1DAC-MAC-MDK; JN88: OK2BBT-OK3LQ-LU; JN89: OK2BKA-BRC-KK-PZW-ZZ; JN98: OK3TTF; JN99: OK2BTI-PWR; JO60: OK1DDO-FAV-FFD-IBL; JO70: OK1DIG; and KN08: OK3OM. Tnx Ted.

**England:** Steve G0CUH in IN69uv is the only active resident amateur on the Isles of Scilly. He runs 5 watts from an FT-726 into a 2-el. quad in the loft. On June 3 he worked 70 grid squares in 5 hours. His young children collect stamps. QSL to Steve Crane, Tater-Du, Church Road, St. Mary's, Isles of Scilly, TR21 0NA, England. Tnx 9H5EE

**Estonia:** G4UPS reports the first major opening for ES stations into the U.K. on May 18, and he worked a new op: Tom ES5RY, whose QSL route is Toomas Soomets, PO Box 177, EE2400 Tartu, Estonia. Also ES1CW cards go to Arvo Kallaste, PO Box 116, EE0090 Tallinn, Estonia. Tnx Ted. On July 6, GJ4ICD also worked a new one: ES5DE in KO38; QSL to Eino Soomets, PO Box 177, EE2400 Tartu, Estonia. Then on July 18, he worked ES5MC/P/0 in KO18. Tnx Geoff.

The callsign ES0SM which was used last August for the ES-SM DXpedition to Saaremaa Island was scheduled to be activated again in late June from Khiuma (Hiiumaa) Island in KO18. This time, the QSL route is via Arvo Pihl ES5MC, P O Box 301, ES2400 Tartu, Estonia. Tnx G4UPS

**European Russia:** Jan OH1ZAA, Jukka OH6DD, and Kiri OH2BC made a DXpedition to Vyborg (KP40) on July 5-10. Using the callsign UX1A, they were worked on 6m in Malta and Jersey on July 7 and 8. QSL to Kari Leino OH2BC, Pitkankalliontie 6-8B4, SF-02170 Espoo, Finland. Tnx 9H5EE, G4UPS, and GJ4ICD.

UA3PW in KO84uf (175 km south of Moscow) is reportedly active on 6m, beginning on June 9. He has specifically asked for QSLs to go direct to his home address: Mr. V. Kanaev, Box 444, 300021 Tula, Russia. Tnx G4UPS.



RA3YO in KO73 was reported QRV. Tnx 9H5EE.  
G4UPS worked RA3TES on July 6 *crossband*. Tnx Ted.

**Faroe Is:** On July 3 and 4, OY3JE in IP62oa was worked in the U.K. Tnx G4UPS.

On July 5, Graham 'Archie' OY6A in IP62mb was attracting pileups from Europe as far south as Malta. Then a week later he was heard from IP61. QSL via G6JQV. Tnx 9H5EE and G4UPS.

**France:** Andy F/DK6AS activated the rare grid JN32 for 3 weeks in July. Tnx 9H5EE.

**Hungary:** HA3MQ was worked by 9H1CG and other stations on the evening of June 3, saying that HA is now authorized on 6m. Others categorically insisted that this is untrue. Other HA's are also frequently being worked on 6m. Tnx 9H5EE.

**ITU Geneva:** Alberto operated 4U1ITU in JN36 from July 4-14. QSL to Alberto Guerra IOXGR, Via S. Lorenzo 30, I-00040 Lanuvio, Italy. Tnx 9H5EE.

**Italy:** Angelo I2ADN/IG9 was in JM65hl on Lampedusa Island up to June 19. Then he activated JM56 on Pantelleria Island from June 21 (working into North America that day) to July 10. After that, he activated JM66, also on Pantelleria Island, until August 18. Also there was talk of a possible visit to JN46ja and JN43 this summer. Tnx 9H5EE. QSL to Angelo R. d'Anna, Via Ortigara, 19 - Bernate R., I 22070 Casnate (Co), Italy. Angelo is the station who, while on Capri last September, worked your editor via the long path for history's only I-KH6 6m QSO; he sent a photo of his R-V which has a large Mirage nameplate (although he runs just 10 watts)!

Pippo IT9FTG/IH9 is also active from Pantelleria Island. Tnx 9H5EE.

**Kaliningrad:** UZ2FWA (the UA2 Radio Club) in KO04ft was active on 6m on June 20-22, with Nick UA2FJ at the controls, working into upper and central Europe. Then on July 8 an operator named Vlad, signing UZ2FWA, was worked in Malta. QSL to Ulrich Mueller DK4VW, Kreutzacker 13, D-3550 Marburg 1, Germany.

Rolf UA2F/DK2ZF in KO04gt (or ft?) was active on 6m July 5-11. QSL to Rolf Niefind DK2ZF, Rademacher Kamp 2, D-2117 Kakenstorf, Germany.

Nick has indicated that further special experimental 6m permits are likely to be issued before a general release of the band is considered. Tnx G4UPS and 9H5EE for all the above.

**Latvia:** YL/ES9C in KO27er was activated by Tom ES5RY and others from July 17 to 19, giving about 450 stations a new country. QSL via ES5RY. Other expeditions were expected to be QRV on 6m between July 25 and August 25. Tnx 9H5EE, G4UPS, and GJ4ICD.

**Liechtenstein:** Pier HB0/HB9QQ in JN47 is expected to be QRV between August 21 and 23. He was hoping to get permission for all-day operation. Tnx 9H5EE.

**Lithuania:** Club station LY2WR in KO24 had its first major opening, all over Europe, on June 23. The operator was requesting direct QSLs, indicating that the 91-92 Callbook details were accurate. However, most of the Europeans who have already received LY2WR QSL cards have received them from SP5CCC. So here are the addresses for both routes: ARS LY2WR, PV Transmitters Radio Club

attn: Rytis, PO Box 927, 232044 Vilnius, Lithuania. Tomasz Ciepielewski SP5CCC, ul Wladyslawa Uminkiego 5-M-122, 03 983 Warszawa (WARSAW), Poland. Tnx G4UPS.

**Norway:** Ron LA1IC, who was very active a few years ago as EA7IC working crossband from the southernmost part of Spain, has asked that his new address be passed along: Mr. Rolf (Ron) Brevig Ulvia, Dyrefaret 3, 3470 Slemmestad, Norway. Tnx G4UPS.

**Poland:** The first official Polish 6m operation took place from June 5 to 15. The callsign was 3Z4PAR, a special experimental callsign authorized by the Polish Radiocommunication Agency. It was used from two locations in Olsztyn (KO03gs): the Agency office and the home of SP4KM (father) and SP4TKK (son). Equipment included an FT-690R, a 15-watt output amplifier, 3- and 4-element Yagis, and a dipole. A team consisting of SP4KM, SP4TKK, SP4BOS, SP4SHH, and SP4SHK worked 888 stations in 28 European countries. QSL via Waldemar Krassowski SP4KM, ul Zwyciestwa 58 m 139, 10-450 Olsztyn, Poland. The experiment was considered 100% successful, with almost 1000 contacts being made. More than half of these were with U.K. stations, and G4UPS commends them for moving up to 51 MHz at times to work some of the G novices.

From July 16 until the end of August, quite a number of special experimental 6m permits were to be issued in various areas of Poland. 3Z4PAR has been reactivated from July 20. 3Z5PAR (SP5EFO) is in KO02md, and 3Z3PAR may show up. Also, several areas in Poland are activating SN, SO, and SR prefixes. Mark SO5PAR (SP5HEJ) in KO02me was noted on July 20. Tom SN5PAR (SP5CCC) is in KO02nf, and expected to be in KN19 from August 5-15. SR5PAR is in KO02. More call-area numbers are expected to be QRV for the whole month of August from other grids such as JO82, JO90, and KO01.

A major meeting with the Polish PTT on September 15 could result in a general allocation of the 6m band within Poland, presumably with the operators' own personal callsigns. Tnx SP4KM, SP4TKK, 9H5EE, and G4UPS for all this great news!

**San Marino:** Tony T77C, who is inactive on 6m from his home QTH because of TVI, has recently operated from T70A, the San Marino club station. The QSL route for T70A contacts is via T70A, A.R.R.S.M., P.O. Box 77, 47031 Rep of San Marino. Tnx G4UPS.

**Sardinia:** IM0/IK2AEQ in JM48fx was worked in the U.K. on July 5 and 11. IS0AGY/P in JM48lw was similarly worked on July 10 and 16-17. Tnx G4UPS and GJ4ICD.

**Scotland:** The well-known DXpedition operators Moira and Laurence (Flo) Howell (GM4DMA) have recently moved. Here are their new details: Nether Hythie Farmhouse, Mintlaw, Aberdeenshire AB42 8HW. Tnx G4UPS.

**Spain:** Finally, on July 10, 80 Spanish amateurs received permission to begin operating on 6m! All EA stations must use the prefix EH for all 6m operations. As mentioned here before, additional restrictions include: frequencies 50.000 or 50.100 (reports vary) to 50.200 only, SSB and CW only, and 30 watts maximum ERP, but no antenna restrictions. Only Class A operators have permits, and these are valid for a period of either one or two years (reports vary), on a very strict non-interference basis.



Many EH stations already in possession of a permit are not QRV yet. The following stations have been heard/worked thus far: IM 66: EH7UH; IM67: EH7AH; IM86: EH7AG; IM97: EH5CHT; IM99: EH5CJ; IN81: EH4CGN/1; IN82: EH1's BFZ/P, DVY/P, and EH, and EH2US; IN83: EH2JG; IN91: EH2's AGZ and AJZ; JN00: EH3KU; JN01: EH3's BTZ, DIH, DZG, EDU, KE, and LL; and JN11: EH3's ADQ, ADW, AQJ, BKZ, CHN, DXU, and IH. In unknown squares in Field IM are EH7's CD and CO. Tnx G4UPS, 9H5EE, GJ4ICD, and W1AW for all the above. This new 6m authority also covers separate DXCC countries EA6, 8, and 9, quod vide.

**Sweden:** Some cards send direct to SM5PRE have been returned. His new address is Jan Johansson, Farullsvegen 70, S-58321 Linköping, Sweden. Tnx G4UPS.

**Switzerland:** G4UPS worked HB9CGL in KO04 on July 5; the latter was running just 200 milliwatts. Tnx Ted.

**Vatican:** Pino I0DUD, station manager for HV3SJ, and Happy W7SW, who often operates CW at that station, are requesting donation of a 6m transceiver for HV3SJ. The station already has a 6m yagi, but no rig. Happy could also carry the rig to S.M.O.M. (1A0) in Roma, and perhaps to IS0 as well. If any reader can help, you can contact Happy at 7847 S.W. 11th Ave., Portland OR 97219-4303, tel. (503) 244-8488. Tnx KA3B.

**Yugoslavia:** Ljube YU7AU is new on 6m from KN04hu, having started on May 11. He is located in Vojvodina, an autonomous province within the Republic of Serbia, with its own callsign prefix. His QSL route is via the Callbook. Tnx G4UPS.

Miki YU2IQ operates from KN04 with homebrew equipment. He is not okay in the Callbook; QSL to Miki Markovic, Nevsinjska 31, 12000 Pozarevac, Yugoslavia. Tnx 9H5EE.

The new official prefix series for Croatia is 9AA-9AZ, per W1AW. This was released on July 5, and less than 8 hours later, 9H5EE worked Zeljko 9A2EY in JN85at on 6m. Tnx John. G4UPS confirms the new 9A for Croatia, and adds that Slovenia has been allocated the S5 prefix. However, the Slovenian PTT are trying to get this changed. Serbia will probably retain the old Yugoslavian callsigns. Tnx Ted.

## NEWS OF AFRICA

**Botswana:** Dave A22MN (ex-J52US, 9L1US) was overheard on 20m June 6 saying that he expected to install his 6m beam the next day. He also said his friend A22JP, an American missionary pilot, has a 6m rig but no antenna. So Dave has loaned him a spare 5-element 6m beam.

**Canary Is:** Participating in the new Spanish authorization, EA8 has joined the 6m festivities. Leo EH8ACW in IL18 now has a 6m license.

Bernd EA8/DJ3OS was active in IL18 for two weeks, beginning July 9. QSL to Bernd Ritter, Schusslerstr. 16, D-6145 Lindenfels-Kolbach, Germany.

Another recent 6m DXCC awardee, 9H1CG, reports that, like GJ4ICD, his EA8/G3JVL card was approved for credit. Tnx 9H5EE and GJ4ICD for all the above.

**Cape Verde:** N8CCC requests the QSL address and grid for D44BC for a contact in 1989 November. If anyone can help, contact Gordon L. Anderson, 2650 Delavan Drive, Dayton OH 45459, or the editor.

**Ceuta and Melilla:** Participating in the new Spanish authorization, EA9 has joined the 6m festivities. On July 18, GJ4ICD worked Peter EH9IB in IM85, and 9H5EE reports that Peter was later joined by Manolo EH9MH in IM85ng. Tnx Geoff and John.

**Heard I:** Jim VK9NS and other operators will probably be going to VK0 for a six-week DXpedition about December/January. It is possible that they will be equipped for 50 MHz.

**Lesotho:** Ray 7P8SR in KG30 does not QSL for IRC's. He declared that IRC's are worthless there. Hal ZS6WB intends to investigate and possibly remedy this. Tnx 9H5EE.

**Malawi:** Per request by N8CCC, here is the 7Q7JL address: P O Box 2907, Blantyre, Malawi.

**Western Sahara:** Naama S01A in IL56fi is reportedly active only from Friday afternoons on weekends. His QSL manager EA2JG reported that Naama has gone to Spain but will be back in S01 in September. Tnx 9H5EE.

## MARITIME MOBILE

Several Europeans have received QSL cards for contacts with K4SYP/mm, showing the following details: Robert J. Panknen, Calabardina 542, 30880 Aguilas, Murcia, Spain. Tnx G4UPS.

DK6AS/mm in JN32 (south of France) was worked by GJ4ICD on July 26. Tnx Geoff.

## BEACON NEWS

**Australia:** VK4BRG has installed a new turnstile antenna at 35 feet above ground at his beacon, and has cleared shrubs away from the near-field. So we can expect better signals from VK4BRG/b in the upcoming F<sub>2</sub> season. Tnx Ron.

**Canada:** As of June 26, the new VE3UBL machine is active in Brougham, Ontario (FN03, about 25 miles NE of Toronto) on 50.059 CW. It runs 24 hours, signing 'DE VE3UBL/B FN03 (long dash) PAX (long dash).' The homebrew transmitter runs 10 watts into a turnstile (another report says vertical dipole) at 125 feet. The South Pickering Amateur Radio Club is the sponsor; QSLs can be sent to Ken Grant VE3FIT, 5 Windrush Tr., West Hill, Ontario, Canada M1C 3Y5. Tnx KA3B and G4UPS.

The VE1MQ beacon, mentioned in the January 26 Bulletin, is now on 50.073. It sends 'VE1MQ B' then a long dash, running 2 watts into a dipole. The grid is FN65, and it's stated to be continuous. Reports to Michael Smith VE1MQ, 408 Canterbury Dr., Fredericton, NB, Canada E3B 4L9. Mike also observes that VE1MUF/b on 50.082 is 'rarely on.' Tnx KA3B.

**Lebanon:** GJ4ICD completed and dispatched the OD5SIX machine in late June. He measures 8 watts output of FSK on 50.0785. The message is "OD5SIX OD5SIX KM74." Tnx Geoff.

**Luxembourg:** A new beacon in JN39av was activated in June. The callsign is LX0SIX, frequency 50.023, with 5 watts to a horizontal dipole. Tnx WVHFN and G4UPS.

**Marshall Is:** V73AT/b will continue active after Tim's departure, and Bob V73BQ has pledged to check its status on a daily basis. The callsign may be changed to V73AX in the near future, but the frequency will remain 50.0366. Tnx Tim.



**Mexico:** N6XQ has found an excellent site for the new northern Baja beacon, atop a cinder cone overlooking the ocean, about 150 miles south of San Diego. It will run 25 watts on 50.028 MHz, and Jack has ordered a stack of four M<sup>2</sup> Sqloop antennas, plus photovoltaic panels for this beacon. It may already be on the air, and will be a fine indicator for Pacific-to-southwestern U.S. propagation, as well as backscatter. Tnx Jack.

**Namibia:** G4UPS notes that the V51VHF beacon is back on the air; indeed its silence lasted for only one day. Tnx Ted.

**New Zealand:** Two addenda have been received for KA3B's 1992 International 6 Meter Beacon List. ZL2MHB in Napier (RF80) continues active 24 hours/day on 51.029 FSK/RTTY [the lower, mark, component has been measured from 51.0287 to 51.0296--ed.]. The homebrew transmitter uses power-stepping at 10/1/0.1 watts into a half-wave vertical at 3 meters above sea level. The message is very lengthy. Reports go to ZL2KT.

ZL2MHF in Mt. Climie (RE78) continues active 24 hours/day on 52.510 FSK [never heard it here--ed.]. The homebrew transmitter has 4 watts to a dipole at 867 meters above sea level. The message is: "CQ CQ DE ZL2MHF 52.510 4W ERP RE78NU ZL2MHF." Reports go to ZL4OY. Tnx ZL2KT via KA3B.

**South Africa:** An update on ZS5SIX/b. It runs 10 watts of FSK to a halo at 20 meters, 24 hours on 50.321. The location is Pietermaritzburg in KG50. Reports go to Hal ZS6WB. Tnx KA3B.

**United States:** The K6FV beacon has been running into an omnidirectional antenna in daytime hours, switching at sunset to a South Pacific beam, but during Sept-Oct will be mostly beamed to the South Pacific.

VE3KKL solves the PY5CC mystery beacon report from last issue: his 3 year old SMIRK beacon list shows it as WB0CGH/b on 50.070 in Lewisville, Texas (EM13mc) with 1.5 watts to a halo at 180 feet. Tnx Gord.

**Zimbabwe:** GJ4ICD is working on a beacon which Z23JO has agreed to maintain. The callsign will be Z21SIX. Tnx Geoff.

## EQUIPMENT NOTES

ICOM has a new all-band transceiver which includes 6m coverage. It is the IC-729, apparently a replacement for the IC-726. Amateur Electronic Supply is pricing it at \$1168. Tnx KH6FOO.

Frank K9AU has an ETO-built commercial rack-mount 40-80 MHz amplifier with a single zero-bias 8874 and built-in power supply. It is capable of 250W output with 7-10W of drive. He is asking \$500 plus S/H. Call 414-781-3709 weeknights after 6pm, or write to 16030 Harrigan Dr., Brookfield WI 53005.

Several readers have inquired whether any group purchase of Ken Davies' super propagation textbook has been organized. Unfortunately not; this editor has been unable to acquire a copy, and would dearly like to have someone volunteer to make arrangements, or at least suggest how copies might be obtained in North America. Here is what we have been able to find out about it:

Davies, Kenneth. "Ionospheric Radio." 580 pages. ISBN 0-86341-186-X. IEE (Institute of Electrical Engineers) Electromagnetic Waves Series 31. 1989. Peter Peregrinus, Ltd.: P.O.Box 26, Station House, Nightingale

Road, Hitchin, Herts. SG5 1SA, U. K. Phone: Hitchin (0462) 53331. FAX: (0462) 59122.

## POSTSCRIPT BY K6FV

Stanford Book Store reports the book is a special order item. The price this last June was \$85.

## 1992 August TEP Observations by FO5DR

Rene Delamare, FO5DR, regularly monitors TV video carriers mainly from stations in the Hawaiian Islands. He also listens for the KH6HME, KH6HI, and K6FV six meter beacons. The following table lists times he observed TEP propagation during August 1992. The times (in UT) are approximate, especially for the upper channels; e.g., his report may read "three hours of TEP on channels 2, 3, & 4 and KH6 beacons starting at 0630."

DATE	KH6bcns	Channel 2	Channel 3	Channel 4	K6FV
0801	0535-0835	0535-0835	0535-0835	0535-0835	0615
0803	0725-0825	0725-0825			
0808	0620-0720	0620-0720			
0809	0615-0815	0615-0815		0655-??	
0813	0610-0910	0610-0910	0745-??	0745-??	0635
0815	0615-0750	0450-0750	0730		0615-30
0816	0550-0850	0550-0850	0710-??		
0817	0730-0930	0730-0930	0730-0930		
0818	0645-0845	0645-0845	0645-0845	0645-0845	
0819		0410-0530*			
0820	0540-0840	0540-0840		0635	0640
0821	0620-??	0535-0835	0715-??		
0828	0610-0910	0610-0910	0610-0910	0610-0910	

\* American Samoan TV  
Other TVs are Hawaiian

The following is a table of hourly  $f_oF_2$ s measured by an ionospheric sounder at Keakawapu HI (N20W156) during August 1992. Please refer to the July bulletin for the significance of these numbers. Note on August 28, 5.8 MHz  $f_oF_2$ s in HI during 55MHz TEP from HI to Tahiti.

The following descriptive codes may appear in place of  $f_oF_2$ :

- A = Blanketing Sporadic E
- B = Complete Absorption
- C = Equipment Problems
- D = Frequency Higher than Equipment
- E = Frequency Lower than Equipment
- F = Spread Echoes
- G = FOF2 is less than FOF1
- I = Smoothed Value
- R = Attenuation

AUG	0	1	2	3	4	5	6	7	8	9	10Z
1	12.7	12.8	13.0	13.0	12.4	10.7	9.0	7.0	7.0	7.1	6.9
2	12.5	13.0	13.0	12.2	11.0	10.2	9.0	8.4	7.8	6.0	5.8
3	11.2	12.1	13.3	13.6	12.1	10.0	9.3	9.2	8.5	8.0	8.2
4	11.3	12.0	12.8	12.9	11.4	9.3	8.0	7.7	7.0	7.5	5.8
5	10.0	10.5	12.0	11.6	11.2	11.6	12.6	11.6	10.0	9.5	8.0
6	7.1	7.5	7.9	7.6	7.2	7.5	6.9	6.1	6.3	6.5	6.3
7	6.9	7.8	9.2	8.0	6.8	6.3	6.1	6.2	6.1	6.1	6.3
9	9.8	10.1	10.7	10.6	9.2	9.6	9.6	9.3	7.5	7.3	7.1
10	12.2	11.9	11.2	11.4	11.2	10.5	9.4	7.2	6.7	6.1	5.6
17	11.7	11.9	11.9	13.5	13.4	10.3	7.3	7.2	8.0	7.5	7.7
18	11.6	12.3	13.1	13.4	13.7	11.2	8.8	8.6	8.4	8.3	9.5
19	12.2	12.5	12.7	13.4	12.8	11.0	7.5	7.0	7.0	7.0	6.3
20	12.5	13.0	14.0	15.0	12.8	10.1	10.6	F	F	F	9.9
21	12.7	12.7	12.5	12.9	14.6	12.4	8.6	7.8	7.5	7.7	7.8
23	12.3	13.4	12.5	10.5	10.3	6.0	7.6	7.0	8.5	6.8	4.7
24	11.2	11.7	10.9	8.5	7.7	6.8	A	4.2	4.0	4.1	4.3
25	8.4	9.2	11.0	12.4	10.7	8.0	6.8	5.4	5.0	4.8	4.8
27	11.0	12.2	13.1	10.1	8.6	7.0	6.0	6.0	5.7	5.6	5.5
28	11.9	12.0	12.2	12.9	12.0	7.1	5.8	5.9	5.8	5.9	6.1